

REMARKS

The foregoing amendment does not include the introduction of new matter into the present application for invention. Therefore, the Applicant, respectfully, requests that the above amendment be entered in and that the claims to the present application be, kindly, reconsidered.

The Office Action dated June 25, 2004 has been received and considered by the Applicants. Claims 1-10 are pending in the present application for invention. Claims 1-10 are rejected by the June 25, 2004 Office Action.

The drawings are objected to because reference number 26 shown in Fig. 2 is inconsistent with what is described in the specification and shown in Fig. 1. The Examiner suggests the reference number should be 16. A redlined version of Fig. 1 is submitted with this response to correct the reference sign mentioned by the Examiner in the Office Action.

The Office Action suggests that the Applicants use a preferred layout as stated by 37 C.F.R. 1.77(b). The Applicants, respectfully, decline to use the section headings suggested by the Examiner because they are not required by 37 C.F.R. 1.77(b) only suggested.

The Office Action rejects Claims 1-6 and 9 under the provisions of 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,134,055 issued to Koike (hereinafter referred to as Koike).

Regarding Claim 1, the Examiner states that Koike shows an optical element for interfacing with a first radiation beam having a first wavelength, and a second radiation beam having a second wavelength and introducing a first wavefront deviation in the first radiation beam and a second wavefront deviation in the second radiation beam wherein the difference between the first wavefront deviation and the second wavefront deviation is proportional to the difference between the first and second wavelengths. The Applicants, respectfully, disagree. The Applicants would like to draw the Examiner's attention to the disclosure of Koike that teaches an optical element having annular grooves formed in integral multiples of the wavelength of light used by a DVD for

reproduction of information (see col. 6, line 51- col. 7, line 29). Koike is very specific in teaching that the aberrations that result from the annular grooves are measured in terms of wavelengths (see col. 7, line 32- col. 8, line 39). The Applicants would like to, respectfully, point out that the rejected claims define subject matter for introducing a first wavefront deviation in the first radiation beam and a second wavefront deviation in the second radiation beam wherein the difference between the first wavefront deviation and the second wavefront deviation is proportional to the difference between the first and second wavelengths. The Applicants, respectfully, assert that introducing an aberration equal to integral multiples of wavelengths as taught by Koike is not equivalent to introducing a wavefront deviation that is proportional to the difference between the first and second wavelengths as recited by the rejected claims. There is no disclosure, or suggestion, within Koike that would motivate a person skilled in the art to create the optical element that is defined by the rejected claims. Therefore, this rejection is respectfully traversed.

Regarding Claims 2, 3, 6 and 9, these claims depend from Claim 1 and further narrow and define Claim 1. Therefore, since Claim 1 is believed to be allowable over Koike for the aforementioned reasons, Claims 2, 3, 6 and 9 are also believed to be allowable.

Regarding Claim 4, the Applicants would like to point out that there is no disclosure or suggestion within Koike that the resulting aberration which is equal to integral multiples of wavelengths is equivalent to defocus. Therefore, this rejection is respectfully, traversed.

Regarding, Claim 5, the Applicants would like to point out that there is no disclosure or suggestion within Koike that the resulting aberration which is equal to integral multiples of wavelengths is equivalent to a spherical aberration. Therefore, this rejection is respectfully, traversed.

The Office Action rejects Claims 1, 7, 8, and 9 under the provisions of 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,067,283 issued to Muramatsu (hereinafter referred to as Muramatsu). The Examiner's position is that Muramatsu discloses an optical element for interfacing with a first radiation beam having a first wavelength, and a second radiation beam having a second wavelength and introducing a

first wavefront deviation in the first radiation beam and a second wavefront deviation in the second radiation beam wherein the difference between the first wavefront deviation and the second wavefront deviation is proportional to the difference between the first and second wavelengths. The Applicants, respectfully, disagree with the Examiner's position for the following reasons. The disclosure of Muramatsu teaches an optical element having annular grooves that creates optical paths that are integral multiples of the wavelength (see col. 4, lines 44-52). Muramatsu specifically teaches that causes aberrations in one of the wavelengths but is transparent to the other (see col. 5, lines 49-59). Accordingly, the differences between the aberrations as taught by Muramatsu is that one wavelength will have aberrations that are integral multiples of the wavelength, and the other wavelength is not operated on, resulting in deviations that are measured in integral multiples of one of the wavelengths. The Applicants would like to, respectfully, point out that the rejected claims define subject matter for introducing a first wavefront deviation in the first radiation beam and a second wavefront deviation in the second radiation beam wherein the difference between the first wavefront deviation and the second wavefront deviation is proportional to the difference between the first and second wavelengths. The Applicants, respectfully, assert that introducing aberrations in one wavelength equal to integral multiples of that wavelength, and not introducing aberrations in the other wavelength as taught by Muramatsu is not equivalent to introducing a wavefront deviation that is proportional to the difference between the first and second wavelengths as recited by the rejected claims. There is no disclosure, or suggestion, within Muramatsu that would motivate a person skilled in the art to create the optical element that is defined by the rejected claims. Therefore, this rejection is respectfully traversed.

Regarding Claims 7, 8 and 9, these claims depend from and further narrow and define Claim 1; which as previously discussed is believed to be allowable. Therefore, these claims are also believed to be allowable.

The Office Action rejects Claims 1, 2, 4-6, 9 and 10 under the provisions of 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,639,889 issued to Yoo et al. (hereinafter referred to as Yoo et al.).

Regarding the rejection with regard to Claim 1, the Examiner states Figs. 2A-6 of

Yoo et al. show an optical element for interacting with a first radiation beam having a first wavelength (650 nm) and a second radiation beam having a second wavelength (780 nm) and introducing a first wavefront deviation in the first radiation beam and a second wavefront deviation in the second radiation beam, the optical element having a surface comprising a phase structure in the form of annular areas and the areas forming a non-periodic pattern of optical paths of different length, the optical paths for the first wavelength forming the first wavefront deviation and the optical paths of the second wavelength forming a second wavefront deviation, and the difference between the first and second wavefront deviation is proportional to the difference between the first and second wavelengths.

The Applicants, respectfully, disagree with the Examiner's position for the following reasons. The disclosure of Yoo et al. teach an optical element having annular areas A1, A2 and A3 which are steps creating aberrations having optical paths differences that are integral multiples of the wavelength (see col. 8, line 67-col. 9, line 19).

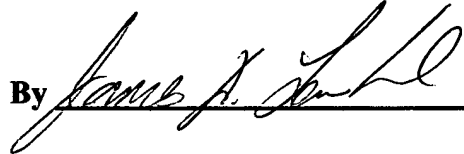
Accordingly, the differences between the aberrations as taught by Yoo et al. is that aberrations are created that are integral multiples of the wavelength. Applicants would like to, respectfully, point out that the rejected claims define subject matter for introducing a first wavefront deviation in the first radiation beam and a second wavefront deviation in the second radiation beam wherein the difference between the first wavefront deviation and the second wavefront deviation is proportional to the difference between the first and second wavelengths. The Applicants, respectfully, assert that introducing aberrations equal to integral multiples of that wavelengths, as taught by Yoo et al. is not equivalent to introducing a wavefront deviation that is proportional to the difference between the first and second wavelengths as recited by the rejected claims. There is no disclosure, or suggestion, within Yoo et al. that would motivate a person skilled in the art to create the optical element that is defined by the rejected claims. Therefore, this rejection is respectfully traversed.

Regarding the rejection of Claims 2, 4, 5, and 6, these claims depend from and further narrow and define Claim 1; which as previously discussed is believed to be allowable. Therefore, these claims are also believed to be allowable.

Applicant is not aware of any additional patents, publications, or other information not previously submitted to the Patent and Trademark Office which would be required under 37 C.F.R. 1.99.

In view of the foregoing amendment and remarks, the Applicant believes that the present application is in condition for allowance, with such allowance being, respectfully, requested.

Respectfully submitted,

By 

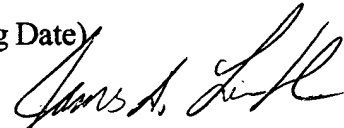
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited this date with the United States Postal Service as first-class mail in an envelope addressed to: Mail Stop: Amendment, COMMISSIONER FOR PATENTS, P.O. Box 1450, Alexandria, VA 22313-1450

on: September 25, 2004

(Mailing Date)



(Signature)



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